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Amendments to the Claims:

This listing of claims replaces all prior versions, and listing, of claims in the application.

Listing of Claims:

Claim 1. (Currently Amended) A high aspect ratio antimicrobial additive microcapsule comprising i) an inorganic antimicrobial agent in particle form and comprising one or more antimicrobial metals or metal ions dispersed in ii) a hydrophilic polymer having a water absorption at equilibrium of at least about 5% by weight, ~~said microcapsule being a three-dimensional particle~~ antimicrobial additive being in the form of a microparticle ~~particle~~ whose longest dimension is from about 5 microns to about 500 microns ~~less than about 3000 microns~~ and whose aspect ratio is greater than about 2.

Claim 2. (Currently Amended) The high aspect ratio antimicrobial additive ~~A high aspect ratio microcapsule~~ according to claim 1 wherein the antimicrobial agent ~~contains a metal or metal ion~~ is selected from the group consisting of silver, copper, zinc, tin, gold, mercury, lead, iron, cobalt, nickel, manganese, arsenic, antimony, bismuth, barium, cadmium, chromium, thallium and combinations thereof.

Claim 3. (Currently Amended) The high aspect ratio antimicrobial additive ~~A high aspect ratio microcapsule~~ according to claim ~~[[2]]~~ 1 wherein the antimicrobial metal or metal ion is silver, zinc, copper or a combination of any two or all three of the foregoing.

Claim 4. (Currently Amended) The high aspect ratio antimicrobial additive ~~A high aspect ratio microcapsule~~ according to claim 1 wherein the antimicrobial agent is selected from the group consisting of metal salts, metal oxides, antimicrobial water soluble glasses, antimicrobial metal ion-exchange agents and combinations thereof.

Claim 5. (Currently Amended) The high aspect ratio antimicrobial additive ~~A high aspect ratio microcapsule~~ according to claim ~~[[4]]~~ 1 wherein the antimicrobial agent is an

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antimicrobial metal ion-exchange agent comprising a ceramic carrier having ion-exchanged antimicrobial metal ions.

Claim 6. (Currently Amended) The high aspect ratio antimicrobial additive ~~A high aspect ratio microcapsule~~ according to claim 5 wherein the ceramic carrier is selected from the group consisting of zeolites, hydroxyapatites and zirconium phosphates.

Claim 7. (Currently Amended) The high aspect ratio antimicrobial additive ~~A high aspect ratio microcapsule~~ according to claim 6 wherein the ~~antimicrobial agent~~ ceramic carrier is a zeolite and the antimicrobial metal ions are that contains silver ions, alone or in combination with zinc ions or copper ions or both.

Claims 8 and 9 (Cancelled)

Claim 10. (Currently Amended) The high aspect ratio antimicrobial additive ~~A high aspect ratio microcapsule~~ according to claim 1 wherein the hydrophilic polymer is a polymer with water absorption at equilibrium of at least about 20% by weight.

Claim 11. (Currently Amended) The high aspect ratio antimicrobial additive ~~A high aspect ratio microcapsule~~ according to claim 10 wherein the hydrophilic polymer is chosen from polyhydroxyethyl methacrylate, polyacrylamide, N-vinyl-2-pyrrolidinone, polysaccharides, polylactic acid, polyamide and polyurethane.

Claim 12. (Currently Amended) The high aspect ratio antimicrobial additive ~~A high aspect ratio microcapsule~~ according to claim 11 wherein the hydrophilic polymer is polyurethane.

Claim 13. (Currently Amended) The high aspect ratio antimicrobial additive ~~A high aspect ratio microcapsule~~ according to claim 1 wherein ~~the microcapsule contains~~ comprising from about 1 to about 1000 parts by weight of the inorganic antimicrobial agent based upon 100 parts by weight of the hydrophilic polymer.

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Claim 14. (Currently Amended) The high aspect ratio antimicrobial additive A-high aspect-ratio-microcapsule according to claim 13 wherein the microcapsule contains comprising from about 10 to about 200 parts by weight of the inorganic antimicrobial agent based upon 100 parts by weight of the hydrophilic polymer.

Claim 15. (Currently Amended) The high aspect ratio antimicrobial additive A-high aspect-ratio-microcapsule according to claim 14 wherein the microcapsule contains comprising from about 20 to about 100 parts by weight of the inorganic antimicrobial agent based upon 100 parts by weight of the hydrophilic polymer.

Claim 16. (Currently Amended) The high aspect ratio antimicrobial additive A-high aspect-ratio-microcapsule according to claim 1 further comprising an inorganic discoloration inhibiting agent.

Claim 17. (Currently Amended) The high aspect ratio antimicrobial additive A-high aspect-ratio-microcapsule according to claim 16 wherein said discoloration inhibiting agent is an ammonium compound.

Claim 18. (Currently Amended) The high aspect ratio antimicrobial additive A-high aspect-ratio-microcapsule according to claim ~~[[17]]~~ 16 wherein the antimicrobial agent comprises an antimicrobial metal ion-exchange agent and said inorganic discoloration agent comprises ion-exchanged ammonium ions contained within said antimicrobial agent.

Claim 19. (Currently Amended) The high aspect ratio antimicrobial additive A-high aspect-ratio-microcapsule according to claim ~~[[1]]~~ 5 further comprising a dopant agent.

Claim 20. (Currently Amended) The high aspect ratio antimicrobial additive A-high aspect-ratio-microcapsule according to claim 19 wherein said dopant is an inorganic sodium salt.

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Claim 21. (Currently Amended) The high aspect ratio antimicrobial additive A ~~microcapsule~~ according to claim 20 wherein said dopant is sodium nitrate.

Claim 22. (Currently Amended) The high aspect ratio antimicrobial additive A ~~high aspect ratio microcapsule~~ according to claim 1 wherein the ~~high aspect ratio microcapsule~~ comprises the microparticles contain multiple particles of one or more inorganic antimicrobial agents dispersed in a hydrophilic polymer.

Claims 23 – 32 (Cancelled)

Claim 33. (Currently Amended) The high aspect ratio antimicrobial additive A ~~high aspect ratio microcapsule~~ according to claim 1 wherein the aspect ratio is from about 4 to about 100.

Claim 34. (Currently Amended) The high aspect ratio antimicrobial additive A ~~high aspect ratio microcapsule~~ according to claim 1 wherein the aspect ratio is from about 5 to about 30.

Claims 35-44 (Cancelled)

Claim 45. (Currently Amended) A method of controlling the rate of release of an altering the release characteristics of an inorganic antimicrobial agent from a polymer matrix, said method comprising incorporating a high aspect ratio hydrophilic antimicrobial additive into said polymer matrix, wherein the antimicrobial additive comprises comprising forming a high aspect ratio microcapsule comprising an i) the inorganic antimicrobial agent in particle form dispersed in ii) a hydrophilic polymer having a water absorption at equilibrium of at least about 5% by weight; said antimicrobial additive being in the form of microparticles whose longest dimension is from about 5 microns to about 500 microns and whose aspect ratio is greater than about 2; wherein the water absorption characteristics of the hydrophilic polymer of the antimicrobial additive is different from that of the matrix polymer which allows for the release of the antimicrobial

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~~agent at a given rate and incorporating the high aspect ratio antimicrobial microcapsule into another polymer which is either non hydrophilic or which has a different hydrophilic property, wherein said microcapsule is a three dimensional particle having an aspect ratio of greater than about 2 and whose longest dimension is less than about 3000 microns.~~

Claim 46-47. (Cancelled)

Claim 48. (Currently Amended) The high aspect ratio antimicrobial additive ~~A high aspect ratio microcapsule~~ according to claim 1 wherein the longest dimension is from about 10 microns to about 500 microns.

Claim 49. (Currently Amended) The high aspect ratio antimicrobial additive ~~A high aspect ratio microcapsule~~ according to claim 1 wherein the longest dimension is from about 20 microns to about 100 microns.

Claim 50. (Currently Amended) The method ~~A high aspect ratio microcapsule~~ according to claim 45 wherein the high aspect ratio is from about 4 to about 100.

Claim 51. (Currently Amended) The method ~~A high aspect ratio microcapsule~~ according to claim 45 wherein the high aspect ratio is from about 5 to about 30.

Claim 52. (Cancelled)

Claim 53. (Currently Amended) The method ~~A high aspect ratio microcapsule~~ according to claim 45 wherein the longest dimension is from about 10 microns to about 500 microns.

Claim 54. (Currently Amended) The method ~~A high aspect ratio microcapsule~~ according to claim 45 wherein the longest dimension is from about 20 microns to about 100 microns.

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Claim 55. (Currently Amended) A high aspect ratio antimicrobial additive microcapsule comprising i) from about 1 to about 1000 parts by weight of an inorganic antimicrobial agent in particle form dispersed in ii) 100 parts by weight of a hydrophilic polymer, said hydrophilic polymer having a water absorption at equilibrium of at least about 5% by weight and said ~~microcapsule being a three-dimensional particle~~ antimicrobial additive being in the form of a microparticle whose longest dimension is ~~less than about 3000~~ from about 5 to about 500 microns and whose aspect ratio is greater than 2.

Claim 56. (Currently Amended) The high aspect ratio antimicrobial additive ~~A high aspect ratio microcapsule~~ according to claim 55 wherein the aspect ratio is from about 4 to about 100.

Claim 57. (Currently Amended) The high aspect ratio antimicrobial additive ~~A high aspect ratio microcapsule~~ according to claim 55 wherein the aspect ratio is from about 5 to about 30.

Claim 58. (Currently Amended) The high aspect ratio antimicrobial additive ~~A high aspect ratio microcapsule~~ according to claim 55 wherein ~~the microcapsule contains~~ comprising from about 10 to about 200 parts by weight of the antimicrobial agent based upon 100 parts by weight of the hydrophilic polymer.

Claim 59. (Currently Amended) The high aspect ratio antimicrobial additive ~~A high aspect ratio microcapsule~~ according to claim 55 wherein ~~the microcapsule contains~~ comprising from about 20 to about 100 parts by weight of the antimicrobial agent based upon 100 parts by weight of the hydrophilic polymer.

Claim 60. (Currently Amended) The high aspect ratio antimicrobial additive ~~A high aspect ratio microcapsule~~ according to claim 55 wherein the antimicrobial agent is an antimicrobial metal ion-exchange agent comprising a ceramic carrier having ion-exchanged antimicrobial metal ions.

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Claim 61. (Currently Amended) The high aspect ratio antimicrobial additive ~~A high aspect ratio microcapsule~~ according to claim 60 wherein the ceramic carrier is selected from the group consisting of zeolites, hydroxyapatites and zirconium phosphates.

Claim 62. (Currently Amended) The high aspect ratio antimicrobial additive ~~A high aspect ratio microcapsule~~ according to claim 60 wherein the antimicrobial agent ceramic carrier is a zeolite and the antimicrobial metal ions are that contains silver ions, alone or in combination with zinc ions or copper ions or both.

Claim 63. (New) The high aspect ratio antimicrobial additive according to claim 5 wherein the antimicrobial metal ions are silver ions, alone or in combination with zinc ions or copper ions or both.

Claim 63. (New) The high aspect ratio antimicrobial additive according to claim 60 wherein the antimicrobial metal ions are silver ions, alone or in combination with zinc ions or copper ions or both.